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News Letter

FRANK W. WILEY, Director

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Published by
MONTANA AERONAUTICS COMMISSION
P. O. Box 1698 Helena, Montana
Member of
National Association of State Aviation Officials

Vol. 9, No. 4

MAY, 1958

WARNING!
Restricted Aircraft Performance

It is important that you keep in mind the reduced performance of your airplane due to increased temperature with the summer weather. An analysis of aircraft accidents each year show a trend of causes which are directly related to that type of weather and the time of year.

An analysis of a recent airplane accident shows that the cause may be attributed to unseasonably high temperatures which affect the take-off characteristics of the airplane. A Montana pilot was involved in an airplane accident immediately following take-off from a recreational and emergency field and the probable cause was failure of the airplane to clear obstructions near the airport resulting in a stall followed by major damage to the aircraft and serious injury to pilot and passenger.

The field is located 4,150 feet above sea level, the runway is 2,000 feet in length with a noticeable gradient. It is estimated that the temperature was approximately 85 degrees and it is probable that there were adverse air currents due to the surrounding terrain.

Reference is made to the operational altitude chart which is printed on the back of the Montana aeronautics map and it may be seen that the density altitude of the emergency field at the time the pilot attempted take-off was slightly over 7,000 feet. Indications are that the airplane was functioning normally and that the contributing factors to the accident were high temperature and adverse air currents.

Be familiar with the load limitations and the maximum gross weight of your airplane and use your operational altitude chart in computing the estimated take-off distance which will be required by your aircraft. Keep a 20% margin on all factors.

FLYING PRESIDENTS

President Eisenhower has continued and expanded a trend in Presidential transportation pretty much initiated by former President Truman by making extensive use of air travel. Not only has he made all of his major trips since his election to the presidency via air, but he has also used a so-called light-twin aircraft and a helicopter for shorter trips.

As a General of the Armies, Mr Eisenhower had the opportunity to learn much about air power and the real advantages of air travel, but his aviation experience goes back much farther.

According to the Aircraft Owners and Pilots Association, the President soloed an aircraft on May 19, 1937, at Zablan Field in the Philippines and he qualified for his Civil Aeronautics Administration pilot's certificate on October 30, 1939. The fact that he made good grades in his flight examinations and received his pilot's certificate at the age of 49 is an indication that middle-aged men can certainly assimilate the fundamentals of flight As far as we know, President Eisenhower is the first President to be rated a pilot and the AOPA has elected him to membership as a result

SOME HOPE FOR US SYNTHETIC PILOTS

Two new simplified aircraft instrument systems have been announced, that can provide the pilot with a synthetic picture of the ground and navigational situation regardless of weather and flying conditions.

One type is a flight data display, known as the "Contact Analog." It is a display on a cathode ray tube similar to that of a home television receiver. It eliminates the need for a half dozen or more instruments requiring different interpretations by a pilot, since the picture presented is an integrated composite of those referenced in the individual indications. The other version is a thin cathode ray tube which will enable pilots to see what air traffic and terrain lies ahead regardless of darkness, fog or clouds.—Va. Newsletter.

CORRECTION

The February Newsletter contained an item under the requirements for a commercial pilot examination under the new Part 20 of the Civil Air Regulations in which a note stated that "Lazy eights and chandelles are not required." This office has been advised of a misprint on this item and it should read that "Lazy eights and chandelles are NOW required"

They are both good practice.

GENERAL AVIATION SURVEY

The Civil Aeronautics Administration has announced that a survey will be conducted to determine the type and amount of flying in the general field of aviation during 1957.

All aircraft owners are urged to complete and promptly return the questionnaires, which have been sent out, for a 12 percent sampling of the various uses made of the aircraft during the year. This information will be of great value to aviation industry and will be used as a planning tool by the CAA in providing air navigation aids and air traffic control services.

SPONSOR "AIR ENCAMPMENT"

The Columbia Aviation Country Club, of Portland, is striking a good missionary blow for private aviation and having some fun at the same time.

The club is working with the Portland Boy Scout Council in putting together an "Air Encampment" for a group of older scouts, ages 14-18, known as "Air Explorers" for the week-end of July 12-13. According to tentative plans the CACC will provide their aircraft to fly the scouts to some "wild and woolly spot" e.g. Blakely Island or Red's Horse Ranch, for the week-end. In addition to the obvious fun of making the trip, the flight would afford an opportunity for the scouts to learn some practical navigation and airmanship.

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE "To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense, to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform aviation laws and regulations, and to otherwise encourage co-operation and mutual aid among the several states"

ANNUAL MEETING MPA

The annual meeting of the Montana Pilots' Association will be held in Miles City on May 30th and 31st. The Miles City pilots are acting as hosts and an excellent program has been arranged with professional entertainment.

LET US PLAN ON MEETING OUR FRIENDS AT THIS OUTSTANDING AVIATION EVENT OF THE YEAR!

How Safe Is the Business Man, Flying In a Company-Owned Aircraft?

The Civil Aeronautics Board, in a recent study made available to the National Business Aircraft Association, has this to say:

"The passenger fatality rate per 100,000 hours in executive flying was 1.12 (a 2.14 rate for aircraft exceeding 12,500 pounds and a 0.81 rate for those of lesser weight). The statistics for scheduled services show a 3.78 passenger fatalities per 100,000 hours."

The U. S. scheduled airlines, NBAA points out, have the highest safety record in the world for air carriers. National Safety Council has, in their reports, shown that on a scheduled air carrier a passenger is four times safer than when riding in his private automobile.

In reviewing the period from 1951 through 1956, the CAB report states: "This analysis points to the fact that a very satisfactory level of safety prevails in executive (corporate) flying and illustrates a high standard of pilot competency."

During the six-year period under study, business aircraft flew about 22,757,000 hours as compared to 15,586,618 hours flown by the domestic scheduled air carriers, the CAB report states.—NBAA

DOUGLAS FORESEES AIR SPEEDS INCREASING TEN TIMES

Rockets and nuclear powered commercial aircraft attaining speeds "10 times that achieved by such aircraft as the DC-8" were forecast by Donald W. Douglas, Jr., president of Douglas Aircraft Co., Inc., at the conference of the Federation Aeronatique Internationaole in Los Angeles.

"The nuclear-fission process," he claimed, "can be used as a substitute for the combustor in any type of power plant." Citing the many engineering problems in developing such aircraft, Douglas paid particular attention to radiation shield weight requirements. The Douglas president estimated nuclear powered aircraft weight "on the order of 500,000 pounds, some 71 tons heavier than the B-36 bomber."

Douglas called for future planes to fly higher, faster and more economically. "However well a commercial airliner may perform," he said, "to succeed, it must be profitable for the carrier to operate and profitable for the industry to manufacture." This formula, he added, is sometimes re-balanced for the military.

MANNED MOON SHIP POSES ENIGMA, BUT TRIP MAY BE NEAR

Man may soon launch a rocket to the moon or briefly orbit the earth in a high performance aircraft, but many difficult problems still remain to be solved before man himself blasts off into outer space for sustained periods of flight.

That, in summary, is the opinion of Alfred M. Mayo, Douglas Aircraft Company scientist, in a paper on space cabin design delivered before the American Astronautical Society in New York City.

Mayo, who is also president of the Space Medical Society of the Aero Medical Association, appealed for an integrated effort to consider the total requirements for space cabin design if the human operators are to survive and function effectively once they escape the earth's atmosphere.

He said cabin survival requirements alone will exceed the biological and chemical balance found in the environment of a "typical small earth city."

"Practically every branch of natural science will need to contribute to the adequate solutions of these problems," Mayo declared.

The chief equipment and safety research engineer said a series of "major scientific break-throughs" are necessary to overcome some of the mysteries still confronting space planners. —(Legion Air Review).

THE DEVIL!

Military pilots often use the word "angels" to indicate altitude. "One angel" means 1,000 feet of altitude. Flying at "11 angels" means flying at 11,000 feet above sea level.

GRASSHOPPERS?

A good cricket, if he takes care of himself and stays in trim, can jump eight feet at a time.

BRAKES — BRAKES — BRAKES!

Improper use, or lack of proper use of BRAKES is probably the largest cause factor in landing accidents.

An aircraft is slowed rapidly by brakes if there is good traction. Inertia frequently throws the pilot's weight forward causing more and more severe application of brakes with the result that she slows down and noses-up before he does anything about it.

A swerve is frequently started at touch-down because a pilot has one brake applied without being aware of this fact.

Frequently a pilot gets one heel or foot on both brakes, or on the opposite brake on the co-pilot's side—which produces unexpected results.

Many pilots jam on the brakes (lock the wheels) as she slows up and then wonder why things happen

If on green or wet grass—she slides.
If on hard snow or ice or wet runway—she slides.
If on soft snow or soft ground—she slides, but digs-in and piles snow or mud ahead of the wheels and noses over.
If loose gravel—she slides.
If she is sliding and one wheel hits a good traction spot—she swerves into a ground loop.
If she is sliding and both wheels hit a good traction area—she flips.
If he keeps the brakes on severely as she slows down—she noses over.
If you have to stop in a short distance—get the brakes on early and hard, **BUT release them gradually as speed diminishes.**
If the surface is rough and she bounces or skips—she won't slow down as fast as usual.
If the tail starts up—due to severe use of brakes (tail wheel aircraft) you can continue to use pretty strong braking and blast the tail down with the prop—without **necessarily** extending the roll-out. Gently does it, usually, in both application and release.
You can touch-down with brakes locked and slide the tires, even with very good traction, BUT, get her tail-heavy before touch-down and as she slows down you have to gradually release the brakes.

Light Twins: They really fly nice and can be handled in cross-winds just about the same as any single-engine tricycle gear.

A slight twist of the wrist—to use a little more of the windward engine—sometimes prevents weather-cocking on final and roll-out, but by and large the practice is to lower the windward wing and use a little top rudder.

Watch the business of chopping power entirely prior to touch-down as the stall characteristics of all light-twins are not the same.

Not enough time or space—to go into engine-out approach and landings, but if she wouldn't hold altitude on one engine—don't try a go-around.

Attempted landings on unlighted airports and private strips are the occasion for many accidents. It's nice to get into your own back-yard, but it's cheaper and safer in the long run not to try it.

Turns to Final. This is a place where a lot of pilots are running out of flying speed.

Undershooting. You can't get there—if you let the airspeed drop too low. Be alert with your hand on the throttle. If high elevation or downwind—don't be fooled by higher ground speed—it's the airspeed that counts.

Overshooting. The time to prevent overshooting is during the traffic pattern approach to and on final.

Don't try a go-around with full flaps—set them for the best climb configuration (if you know it).

Most of these landing accidents are just a case of the nut coming loose on the stick or wheel.

It may be wishful thinking, but we believe you can avoid 50% of these accidents, IF YOU SLEEP NIGHTS, instead of during the time you are flying an airplane.—CAA.

LOSE NOT THY AIRSPEED LEST THE EARTH RISE UP AND SMITE THEE

Each month produces a number of accident reports in our office attributed to gustiness and turbulence on landing or take-off. It's real smart business to be particularly alert to stall conditions when these conditions are present. The wise pilot will use a higher indicated airspeed than is customary in take-offs and landings during these times. When landing in a strong wind, airspeed may tend to drop as the aircraft approaches the ground, due to wind gradient.—Calif. Safety Bull.

INSTRUMENT FLYING SHOWS SUBSTANTIAL GAIN

1957 was marked by a 47% increase in instrument approach along the nation's civil airways according to the most recent statistics. Fix-postings increased by 22% in 1957 and totalled almost 28,000,000 IFR fixes reported.

The increase in instrument approaches is felt by CAA to be partly due to the fact that in the Washington-New York-Chicago triangle, the airlines have agreed to conduct all their operations under instrument flight rules. In addition, however, they report that the fleet of executive and business airplanes has utilized instrument navigation and approach facilities to increase the value of the airplane as a business tool. This group alone increased their use of facilities for approach purposes by 69%.

A sharp upswing in instrument training at Illinois airports has been noted by many Illinois airport operators. More and more Illinois pilot-businessmen are demanding greater utility of their airplane and as a consequence are engaging in instrument instruction to obtain an instrument rating which will protect them in marginal weather and will allow them to extend the usefulness of their airplane

WILL MANUFACTURE OLD FORD TRI-MOTOR CRAFT

Gardena, Calif.—The Ford Tri-Motor airplane will be manufactured again by a firm in this Los Angeles suburb, but with a few modifications and under a new name

The Ford, made during the early thirties—and revived four years ago, is being built by Hayden Aircraft Corp., a Bellflower, Calif., company which merged last February with Aircraft Hydro-Forming, Inc., of this city to speed output of the airplane

Robert E. Hayden said the plane will be called the Stout Bushmaster. Actual parts fabrication is underway and the first plane is scheduled to be finished sometime this year.

Hayden has acquired one of the Fords for modification and flight testing. The plane, one of an estimated ten of its kind remaining in the U. S. now is based at Compton Airport near here. Hayden plans at first to build three Stout Bushmasters

Market for the plane has grown tremendously since its re-conception four years ago, Hayden officials said.

As yet, the company says, there is no proven substitute for the three-engine rugged "Flying Truck," that can carry nearly the load of a DC-3 and yet go into and out of the same places as a Piper Cub.

Hayden expects to be mass producing the Bushmaster by 1959.

To do the job Hayden merged with Aircraft Hydro-Forming and moved all of its facilities into Hydro's 25,000 square foot plant here. Hydro-Forming will perform all manufacturing functions for fabrication of the first three models. Actual parts fabrication is underway.

Engineering has been developed by Hayden. Parts to be purchased include Pratt & Whitney R985 450-hp engines, propellors, wheels, instruments and a few other items from outside suppliers. Corrugated metal for the outer skin has been ordered from one of the major aluminum processors which still has the original dies from the days when the Ford planes were being made.

Hydro will do the manufacturing work while Hayden's engineering and marketing facilities will be used.—General Aviation News.

IDAHO TOURS

Flying groups of five or more aircraft who are seeking recreational or vacation places to go during the summer or fall months are offered the courtesy services of the Idaho State Department of Aeronautics if they are interested in visiting the Gem State

Chet Moulton, Director of Aeronautics for Idaho, has offered the facilities of his department in arranging complete package all expense proposals for group flights to Idaho of five or more aircraft if interested tour parties will indicate their specific interests and seasonable preferences.

Inquiries should be addressed to the Idaho Department of Aeronautics, P. O. Box 1929, Boise, Idaho.

DEW LINE COMPLETED

The Arctic portion of the Distant Early Warning (DEW) Line has been completed. This giant radar fence stretches for 3,000 miles along the northern rim of the North American Continent. Mission: to detect penetration of its radar fence by unidentified aircraft

Confusion say: Socked-in field is like toothpaste—getting out is easy, return difficult.

NASAO ASKS 10-YEAR EXTENSION OF AIRPORT AID

A. B. McMullen, Executive Secretary of the National Association of State Aviation Officials, yesterday asked the President and Congress to extend the Federal-Aid Airport program for ten years to June 30, 1969, and to increase the Federal contribution to the program to $100 million annually.

Testifying before the Senate Aviation Subcommittee, McMullen quoted a portion of the Curtis report which declared: "Of all elements in our national system of aviation facilities, airports have been the most neglected." He added that an average of ten airports per state "die" for one reason or another each year. Of the approximately 7,300 airports in the U. S., about 63.5% are privately owned, and it is from these that the loss ratio is the highest, he said.

"Public ownership is about the only way we can be assured that the most desirable of these privately owned 'close-in' airports will not succumb to housing developments on industrial plants that can afford to pay more for the land than it can return as an airport," he pointed out, adding that the transfer of airport ownership will require a continuous allotment of public funds.

NASAO holds the view that development and maintenance on a balanced national airport system, adequate to meet the needs of civil aviation, is a mutual responsibility of local, state and federal governments. McMullen implied that this is no time for the Federal government to shirk its responsibility in this area

John R. Wiley, Director of Aviation of the New York Port of Authority, pointed to the $207 million investment the Authority has in the New York airports, to which the Federal government has supplied but $12.5 millions, about 5.7% of the total. At 30 other large U. S. airports, the Federal share averages around 20%.

R. W. F. Schmidt, American Assn. of Airport Executives president, said the greatest single deterrent to the development of civil airport facilities has been the instability of the Federal-Aid Airport program. "Whole airports have not come into being, not to mention scores of projects to improve or expand existing facilities, because sponsors have simply put them aside until Federal fiscal policy matures," he said.—Aviation Daily

CAA ENFORCEMENT

Los Angeles—Student pilot certificates were revoked in two cases this week in enforcement proceedings in Los Angeles before Examiner H. F. Martin of the Civil Aeronautics Board. In each case, the student pilot was charged with violating the Civil Air Regulations by carrying a passenger. Each unsuccessfully contended that his flight was legally permissible, since his passenger held a valid private pilot certificate.

CAB Examiner Martin revoked the certificate held by Carl H. Sturm of North Hollywood, for a period of four months. Sturm made a flight on August 12, 1957, to San Diego and return, having as a passenger a business customer who held a private pilot certificate

In the second case, the certificate of Henry Beauchamp, Montebello realtor, was revoked for six months when the Examiner heard testimony that Beauchamp, a pilot of 300 hours experience, flew his own aircraft over the Tournament of Roses parade last New Year's day. Beauchamp's passenger was his brother, Elmo, who took photographs during the flight.

The Examiner's decisions clarified the fact that a student pilot, in command of his own (or rented) aircraft, is prohibited from carrying any passenger, even though the passenger holds a valid pilot certificate. The student may, of course, be accompanied by a qualified instructor

The Examiner is here from Washington, D. C., to hear evidence in four air safety cases filed by the Civil Aeronautics Administration.—Norman V. Hendy, Jr., General Safety Inspector, CAA, Helena.

ANCIENT RULES REMAIN VALID

and here are some.

If you are a sailor you can use this one: Mares' tails and mackerel scales make tall ships carry short sails.

But, we are airmen, therefore, we respect the ones that will get us safely to our destination. Where practical we choose alternate airports on the lee side of nearby terrain because downslope winds warm adiabatically, causing evaporation of clouds and reducing precipitation which results in favorable ceilings. Who can quarrel with a nice, big clear spot, in an overcast? When receiving the latest weather dope at your destination, evaluate the height of ceiling reports by checking the temperature and dew point spread. Ceilings that have a spread of one degree for **each 250 feet** of ceiling may generally be trusted, but if the spread is less, it is dubious if the weather will hold. This is due to a difference between temperature, and dew point lapse in the mixing air causes 100% relative humidity at an altitude of about 280 feet for each degree of spread. Clouds will evaporate below that supporting altitude.—Calif. Safety Bulletin

FLIGHT SCHOLARSHIP STUDENTS!
Get Your CAA Written Passed!

ELLIOTT FIELD

The first emergency landing strip constructed by the commission is nearing completion. This field is located midway between Drummond and Missoula and adjacent to Rock Creek Lodge.

All grading, fencing, and marking has been finished and the 4,000 foot landing area has been seeded. It is probable the field will be open for use about August 15th, as a good stand of grass should be developed by that time.

Elliott Field is named after the property owner, where this emergency and recreational airport has been built.

LEST WE FORGET

If all the bent and bruised pilots who have crawled out of wrecked airplanes saying, "I didn't think conditions warranted carburetor heat" were laid end to end, they would clutter up approach zones across the Nation. Any muggy or high humidity day, even in high air temperatures, calls for the prudent use of carburetor heat on final, and periodically enroute. To disregard this cardinal rule is to invite disaster when you nudge the throttle to clear that last obstacle between you and the runway.

DON'T FLY WITH A COLD UNLESS YOU CAN HEAR WITHOUT EARDRUMS—WHICH IS A DARN GOOD TRICK

DON'T MISTAKE AIRPLANE FOR "EXPLORER" SAYS CAA

Washington D. C., March 5—(Special)—With the U. S. satellite "Explorer" passing overhead on regular schedule, it appears that "moon-watching" is about to become a popular pastime.

The Civil Aeronautics Administration reports an increased number of inquiries concerning "those lights in the sky." It appears that aircraft running lights, at high altitudes, sometimes raise false hopes in "moon-watching" circles.

As an assist to moon watchers the CAA offers the following information on aircraft running lights.

Following the custom of the ships at sea, every aircraft carries a red light on the left (port) wing tip and a green light on the right (starboard) wing tip. On the tail a red and white light are shown. The red light is an addition to the customary white stern light of ships.

On some aircraft these lights flash in sequence, on others they do not. The CAA added that many aircraft are now being equipped with a rotating red light mounted on the fuselage top and bottom or on the tip of the tail.

General Aviation Safety Inspection Schedule

City	June
Billings	2-9-16-23-30
Bozeman	12
Butte	11
Glasgow	11
Glendive	18
Great Falls	5
Havre	4
Helena	2-9-16-23-30
Miles City	19
Missoula	19
Wolf Point	12

PILOT'S PLEDGE FOR '58

For safety and my passengers' security, I promise

1. to plan my flights carefully and carefully preflight my plane.
2. to keep a close check on weather and give Pireps to the Weather Bureau.
3. to file a flight plan on all XC's and close that plan at my destination;
4. to heed my limitations and those of my plane.
5. to keep a watchful eye for others in the sky.
6. to live up to the responsibilities of having a pilot's ticket

MAKE 1958 A YEAR OF SAFE FLIGHT"

FOR SALE

54 Piper PA 18, 135 hp. with spray unit. Total time 610 hrs. Very little spray time. Licensed to 5/9/59. 80 hrs. since new prop and pistons. Always hangared, never damaged. Contact Lewis C. Janssen, Coalwood, Montana.

PILOT WANTED

Experienced pilot with commercial and instructor ratings. Submit experience record and references with first application. Write Morrison Flying Service, Helena, Montana.

FOR SALE

1946 Luscombe 65-hp. with fresh license and in good condition all through. Cruises 90. Price $1,225.00 firm. Write or call Royal Turley, Three Forks, Montana, Phone 48-W.

FOR SALE

Two (2)—Super cub sprayers; 150-hp. equipped with Sorensen 70-gallon belly tank spray units. One ship has 350 hrs. total time A&E. Other ship had 170 hrs. total time A&E. Harlo Flying Service, Box 813, Harlowton, Montana.

FOR SALE

1946 Bellanca Model 14-13; 1,000 hrs. total; 400 SMOH, on 150 Franklin, 100 hrs. STOH. Contact Walt Hunt, 219 W. Broadway, Missoula, Montana.

WANTED TO BUY

Will pay cash for clean, low time Beech Bonanza, Model E, F, or G. Matt Zupan, Box 656, Miles City, Montana. Phone CE 2-1354.

FOR SALE

PA20 Pacer 4-place '50 model; 125-hp. Lycoming. Has flaps, metal prop. New factory wings in '56. Fresh annual inspection, new shock cords and battery. 75 hrs. since top O.H., including new pistons. 350 since major. Bendix VHF Trans. L.F. receiver and Std. band.

Price $3,250. Sylvan Nylander, Dodson, Montana.

FOR SALE

Stinson Voyager 150, manufactured Dec. 1946. 350 hrs. since major T.T. 1096. LF radio, full electrical system. RC-LB. sensitive ALT. Recording tack plus Standard equipment, wheel pants, tires, glass, fabric good. Blue with white trim. Clean interior. Always hangared.

Price $1,950.00. Wayne K. Krueger, Reedspoint, Montana.

FOR SALE

1946 Aeronca Champion, 65-hp. 211 hrs. since top overhaul on engine. Fair fabric, good tires, glass and windshield. Periodic inspection completed about April 25, 1958. K. C. Carpenter, P. O. Box 1386, Missoula, Montana.

FOR SALE

Taylorcraft DCO-65 475 TT 28 SMOH. New wing covers, new windshield, new interior, new finish. Fabric good. New license and 100 hr. Exceptional condition. $1,050 with metal prop. $995 wood prop. Byron Bayers, Twin Bridges, Montana.

FOR SALE

Two Stinsons and one Cessna 140, good, clean airplanes, complete with radios and primary instrument panels. Must sell. Contact Walter E. Huffman, Big Timber, Montana.

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News Letter

P. O. Box 1698
Helena, Montana

Mrs. Loretta B. Peck
School of Mines
Butte, Montana